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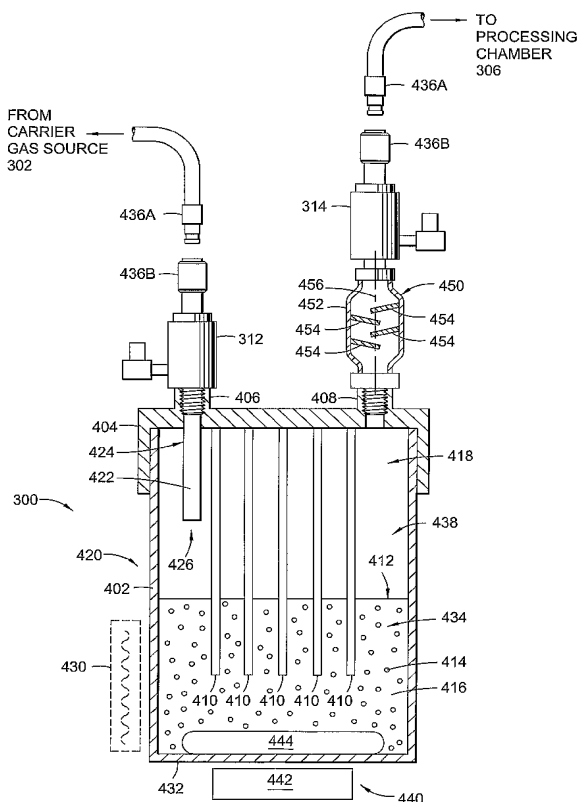
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(54) Title: METHOD AND APPARATUS FOR GENERATING A PRECURSOR FOR A SEMICONDUCTOR PROCESSING SYSTEM



(57) Abstract: Embodiments of the present invention are directed to an apparatus for generating a precursor for a semiconductor processing system (320). The apparatus includes a canister (300) having a sidewall (402), a top portion and a bottom portion. The canister (300) defines an interior volume (438) having an upper region (418) and a lower region (434). In one embodiment, the apparatus further includes a heater (430) partially surrounding the canister (300). The heater (430) creates a temperature gradient between the upper region (418) and the lower region (434). Also claimed is a method of forming a barrier layer from purified pentakis (dimethylamido) tantalum, for example a tantalum nitride barrier layer by atomic layer deposition.



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